

WHAT IS CLAIMED IS:

1. A method comprising:

2 receiving status information concerning a size and  
3 location of a data packet;

4 receiving statistical information concerning a bus  
5 condition; and

6 storing the status information and the statistical  
7 information on a storage device using a single write  
8 procedure.

1 2. The method of claim 1 further comprising receiving the  
2 data packets from the data bus.

1 3. The method of claim 1 further comprising monitoring the  
2 status of the bus and generating the statistical information.

1 4. The method of claim 1 further comprising generating  
2 control information which specifies the storage location for  
3 each data packet.

1 5. The method of claim 4 further comprising storing the  
2 control information on the storage device.

1 6. The method of claim 5 further comprising storing each  
2 data packet on the storage device at the storage location  
3 specified by the control information.

1      7. The method of claim 5 further comprising retrieving the  
2 data packets stored on the storage device.

1       8. The method of claim 5 further comprising retrieving the  
2 status information stored on the storage device.

1       9. The method of claim 1 further comprising monitoring the  
2 data packets, generating the status information about the data  
3 packets, and providing the status information to the method.

1    10. A statistics reporting process comprising:  
2                a status information process for receiving status  
3                information concerning a data packet;  
4                a statistics information process for receiving  
5                statistical information concerning a bus condition; and  
6                a unified write process for storing said status  
7                information and said statistical information on a storage  
8                device using a single write procedure.

1    11. The statistics reporting process of claim 10 further  
2                comprising an Input/Output (I/O) controller connected to a  
3                data bus; wherein said I/O controller receives from said data  
4                bus said data packets and said I/O controller monitors the  
5                status of said bus and generates said statistical information.

1    12. The statistics reporting process of claim 11 further  
2                comprising a control information write process for receiving  
3                control information which specifies a storage location where  
4                each said data packet is to be stored and storing said control  
5                information on said storage device.

1    13. The statistics reporting process of claim 12 further  
2                comprising a device driver process for generating said control  
3                information and providing it to said control information write  
4                process.

1       14. The statistics reporting process of claim 13 further  
2       comprising a packet write process for storing each said data  
3       packet on said storage device at said storage location  
4       specified by said control information.

1       15. The statistics reporting process of claim 14 further  
2       comprising:

3                 a first communication bus for interfacing said  
4       device driver process and said statistics reporting  
5       process;

6                 wherein said device driver process provides said  
7       control information to said control information write  
8       process via said first communication bus.

1       16. The statistics reporting process of claim 15 wherein said  
2       device driver process includes a packet retrieval process for  
3       retrieving said data packets stored on said storage device via  
4       said first communication bus.

1       17. The statistics reporting process of claim 15 wherein said  
2       device driver process includes a status retrieval process for  
3       retrieving said status information stored on said storage  
4       device via said first communication bus.

1       18. The statistics reporting process of claim 14 further  
2       comprising a second communication bus for interfacing said I/O  
3       controller and said statistics reporting process.

1       19. The statistics reporting process of claim 18 wherein said  
2       I/O controller includes a statistical information transmission  
3       process for providing said statistical information to said  
4       statistics information process via said second communication  
5       bus.

1       20. The statistics reporting process of claim 18 wherein said  
2       I/O controller includes a data transmission process for  
3       providing said data packets to said packet write process via  
4       said second communication bus.

1       21. The statistics reporting process of claim 18 wherein said  
2       I/O controller includes a status transmission process for  
3       monitoring said data packets, generating said status  
4       information concerning the size and condition of said data  
5       packets, and providing said status information to said status  
6       information process via said second communication bus.

1       22. The statistics reporting process of claim 10 wherein said  
2       storage device is a system memory.

1       23. The statistics reporting process of claim 22 wherein said  
2       system memory includes a Read Only Memory (ROM) and said  
3       statistics reporting process resides on said ROM.

1       24. The statistics reporting process of claim 10 wherein said  
2       storage device includes a dedicated memory area for storing

3       said statistical information, said control information, and  
4       said status information.

1       25. The statistics reporting process of claim 24 wherein said  
2       dedicated memory area includes:

3                 a control information storage area for contiguously  
4                 storing said control information, and

5                 a status/statistical information storage area for  
6                 contiguously storing said status information and said  
7                 statistical information;

8                 wherein said unified write process stores said  
9                 status information and said statistical information using  
10                a single write procedure.

1    26. A computer program product residing on a computer  
2    readable medium having a plurality of instructions stored  
3    thereon which, when executed by the processor, cause that  
4    processor to:

5              receive status information concerning the size and  
6              location of the individual data packets;

7              receive statistical information concerning various bus  
8              conditions; and

9              store the status information and the statistical  
10          information on a storage device using a single write  
11          procedure.

1    27. The computer program product of claim 26 wherein said  
2    computer readable medium is a read-only memory.

- 1 28. A statistics reporting system comprising:
- 2       an Input/Output (I/O) controller connected to a
- 3       distributed computing network; wherein said I/O
- 4       controller receives data packets from said network,
- 5       monitors the status of said network and generates
- 6       statistical information concerning said network's
- 7       condition;
- 8       a statistics reporting process comprising:
- 9            a status information process for receiving
- 10          status information concerning a data packet;
- 11            a statistics information process for receiving
- 12          said statistical information; and
- 13            a unified write process for storing said status
- 14          information and said statistical information on a
- 15          storage device using a single write procedure; and
- 16          a central processing unit (CPU) for executing said
- 17          statistics reporting process which resides on a Read Only
- 18          Memory.
- 1 29. The statistics reporting system of claim 28 wherein said
- 2        statistics reporting process further includes:
- 3            a control information write process for receiving
- 4          control information which specifies a storage location
- 5          where each said data packet is to be stored and storing
- 6          said control information on said storage device; and

7           a device driver process for generating said control  
8         information and providing it to said control information  
9         write process.

1     30. The statistics reporting system of claim 29 further  
2       comprising:

3           a first communication bus for interfacing said  
4         device driver process and said statistics reporting  
5         process; and

6           a second communication bus for interfacing said I/O  
7         controller and said statistics reporting process.

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